

Evaluation of Sustainability Standards in the Hotel Sector of the Biosphere Reserve Sumaco in the Amazon Region of Ecuador

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Abstract. Tourism plays an important economic role worldwide but has negative environmental, social and cultural impacts. The study examined the sustainability standards in the hotel sector of the Biosphere Reserve Sumaco (BRS) in Ecuador to deduce recommendations for good tourism practices from the status quo and therefore minimize negative effects and optimize current practices of tourism in the future. The study shows (a) a low extent of efforts in the environmental, economic and cultural dimension and (b) partial work in the social dimension of sustainable tourism in the BRS. The sustainability standards, which are valued along sustainable tourism criteria, are neither implemented nor consciously pursued. As well, the analysis illustrates (c) the unconsciousness of the hotel industry according to the importance of the BRS.

Keywords. Ecuadorian Amazon, good tourism practices, sustainable tourism.

Evaluación de los Estándares de Sustentabilidad en el Sector Hotelero de la la Reserva de la Biósfera de Sumaco en la Región del Amazona del Ecuador

Resumen. El turismo juega un rol muy importante en la economía vel global; sin embargo, ocasiona impactos ambientales, sociales y culturales negativos. Este estudio examina los estándares de sustentabilidad en el sector hotelero de la Reserva de la Biosfera del Sumaco (RBS) en la Amazonia Ecuatoriana con el objetivo de generar recomendaciones de buenas prácticas de turismo a partir del estatus quo y minimizar los efectos negativos así como también optimizar las practicas de turismo en el futuro. El estudio muestra: (a) un bajo nivel en los esfuerzos por aplicar buenas prácticas en lo ambiental, social y cultural. (b) Una aplicación parcial en la dimensión social del turismo sustentable con respecto a los estándares de turismo sustentable que fueron evaluados comparativamente, éstos en general no han sido implementados y tampoco están en los planes de los hoteleros hacerlo en el corto plazo. (c) Escasa conciencia de parte del sector hotelero en concordancia con la gran importancia de la RBS.

Palabras clave. Amazonia ecuatoriana, buenas prácticas de turismo, turismo sustentable.

Introduction

Since the middle of the 20th century, tourism has expanded almost uninterrupted and is "one of the largest and fastest-growing economic sectors in the world" (UNWTO 2012a). According to the UN World Tourism Organization (UNWTO) the arrival of tourists increased by 4.6% in 2011 compared to 2010 so that about 983 million travelers were journeying international (UNWTO 2012a). This development is predicted to proceed in the future demonstrating the global importance of tourism.

Despite its economic relevance, tourism has

negative environmental, social and cultural effects (Archer *et al.* 2005) which can be outlined as the damage of nature, the irresponsible exposure to humans and the interference with local culture. To prevent these touristic effects and solve local problems, the concept of sustainable tourism has been discussed widely by scientists, politicians and society actors. Until now, there was no academic consensus about the term's definition (Butler 1999, Clarke 1997). In the following, the UNWTO's definition, which has been cited frequently, will be applied to the investigation in the BRS in Ecuador. Sustainable tourism can be expressed as...

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"Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (UNWTO 2012b).

To specify this definition, the Global Sustainable Tourism Council (GSTC) developed "Global Sustainable Tourism Criteria for Hotels and Tour Operators" (GSTC 2012). These criteria cover four dimensions of sustainability: the economic, social, environmental and cultural dimension. Therefore, the aims of sustainable tourism are on the one side to minimize the negative touristic effects by preserving and promoting the environment and the local culture and on the other side to optimize the economic, touristic and social benefits (*ibid.*).

This research assesses sustainability in the hotel sector in the BRS. The analysis generates recommendations for local hotels to improve their actions and to suggest new business options according to ecosystem preservation and cultural protection in the BRS.

Methods

The case study of the hotel sector in the BRS was developed in several stages. In the first step, secondary literature regarding to sustainable tourism was reviewed to get an oversight of definitions and operationalizations. Especially, the criteria of the GSTC were regarded as important to summarize requirements and processes of sustainable tourism in biosphere reserves in order to create a case-adjusted survey and expert interview. Also, facts about the BRS were collected to include its singularity in the two surveying methods.

Primary information played an indispensable role in the research process as well. The sample selection of the questionnaire was based on the list of all registered hotels in Tena, which had been provided by the Ministry of Tourism of Ecuador. Tena, the capital of the province Napo, hosts the majority of hotels and is the centre of tourism in the BRS. Altogether, there are 57 hotels in Tena which have been identified and categorized by the guidelines of Ecuadorian tourism law. Since two hotels did not respond to the

questionnaire the applied and evaluated sample consists of 55 hotels.

The questionnaire of the survey consisted of two parts. First, it sought to identify the hotelier's awareness and consciousness with regard to the BRS and its importance. Secondly, the sustainability standards of hotelier's were obtained by interviewing them along the four dimensions of sustainable tourism. The core elements of sustainable tourism were the preservation of nature and environmental services; the management of employees and customers; the economic performance of the hotels and actions in favor of cultural conservation (Figure 1).

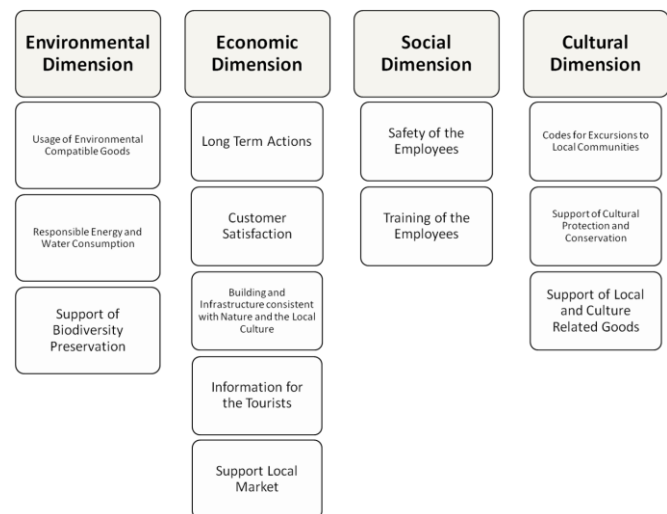


Figure 1. Global Sustainable Tourism Criteria for Hotels and Tour Operators categorized and applied to the investigation in the BRS (GSTC 2012, own figure)

The interpretation of the data analysis expresses the awareness of the hoteliers concerning to the BRS and the realization of sustainability in the hotel industry.

Besides the survey, expert interviews with key informants of the tourism sector in the reserve were conducted to evaluate their perspective on sustainable tourism and its development in the BRS. Overall, five interviews with experts from the Ministry of Tourism of Ecuador, the Ministry of Environment of Ecuador, the Municipality of Tena, the National Secretariat of Planification and Development and an experienced

hotelier of Tena have been documented. The experts were chosen due to their high position in a field related institution and or professional specialization in (sustainable) tourism. The interview was based on the questionnaire and questions on the importance of the reserve and sustainable tourism in the region.

Field Description and Background - The Biosphere Reserve Sumaco

The area around the Volcano Sumaco is known for its biodiversity and cultural singularity (Sumaco Online 2012a). Therefore, in November 2000, the region became a Biosphere Reserve in the context of the UNESCO Man and Biosphere Programme (MAB). The establishment has been supported by local, national and foreign actors as the Ecuadorian Ministry of Environment (MAE) and the German Technical Cooperation (GTZ) (MAE 2010). The main objectives of the corporative actors are the protection of ecosystems, species and culture, as well as the encouragement of economic and social development, sustainability education and the realization of research (UNESCO 2012).

The BRS is located in northeast Ecuador and covers 996,436 ha which is equivalent to 8% of the northern and domestic Amazon (CAF 2009). It is part of three provinces, Napo, Sucumbios and Orellana, and provides space for two river basins, the Río Napo and Río Coca (Sumaco Online 2012a). The core zone is the National Park Sumaco-Napo Galeras. It is divided into two parts: the Volcano Sumaco and the mountain chain Napo Galeras (CAF 2009). The National Park is under legal protection so that there are no human activities to secure the ecological conservation (MAE 2010). The populated buffer zone includes protective forests and timbers, surrounds the core zones and is the main area for research activities (Sumaco Online 2012a). The transition zone is the largest part of the reserve with an extension of 548,051 ha and borders on the buffer zone (about 178,629 ha) (MAE 2010). It is not legally protected and houses tourism, non-governmental organizations, administration and other actors who want to succeed

sustainable development in the region (*ibid.*). Tena is part of the transition zone in the South-West of the BRS and a centre for tourism and institutions in the reserve.

The UNESCO reserve reaches from 400 masl in the tropical rainforest to 3,732 masl at the peak of the Volcano Sumaco (MAE 2010). Its annual average temperature ranges from 6 to 24 °C and the annual precipitation is 2,000 to 6,000 mm (MAE 2010). The differing climate and altitude conditions result in various habitats of the flora and fauna and offer possibilities for tourists to explore nature. A starting point for guided tours within the reserve amongst others is the city of Tena. The MAE describes that in the reserve, 7 to 25 living zones can be found in which 6,000 plant species, 82 mammal and 97 bird species have been recorded (MAE 2010, Sumaco Online 2012b). Furthermore, 28 amphibian, 58 snake and 86 frog species have been documented (Sumaco Online 2012b). As of yet, the Biosphere Reserve Sumaco offers on-going opportunities for investigations because new species are found continually and not all of these species have been identified.

But, not only the flora and fauna are of great importance, also the cultural heritage requires protection and conservation. About 110,000 habitants live in the Biosphere Reserve Sumaco (Sumaco Online 2012a). More than 70% of the population relate to the indigenous culture of Kichwa while the other 30% are recorded as settlers (*ibid.*). Most of the people live along the streets or the river basins.

Although there have been many attempts to foster sustainability in the past, the region faces many challenges. The majority of the habitants are confronted with poverty, lack of education and dependency to local resources (*ibid.*). Poverty can be identified as a cause for the high number of endangered species in the area, as in the improper use of flora and fauna and as well the exploitation of oil (*ibid.*). Tourism has been recognized as an alternative to other economic sectors. It has the potential to reduce the dependency on natural resources by supporting the indigenous population and conserve the environmental specialty.

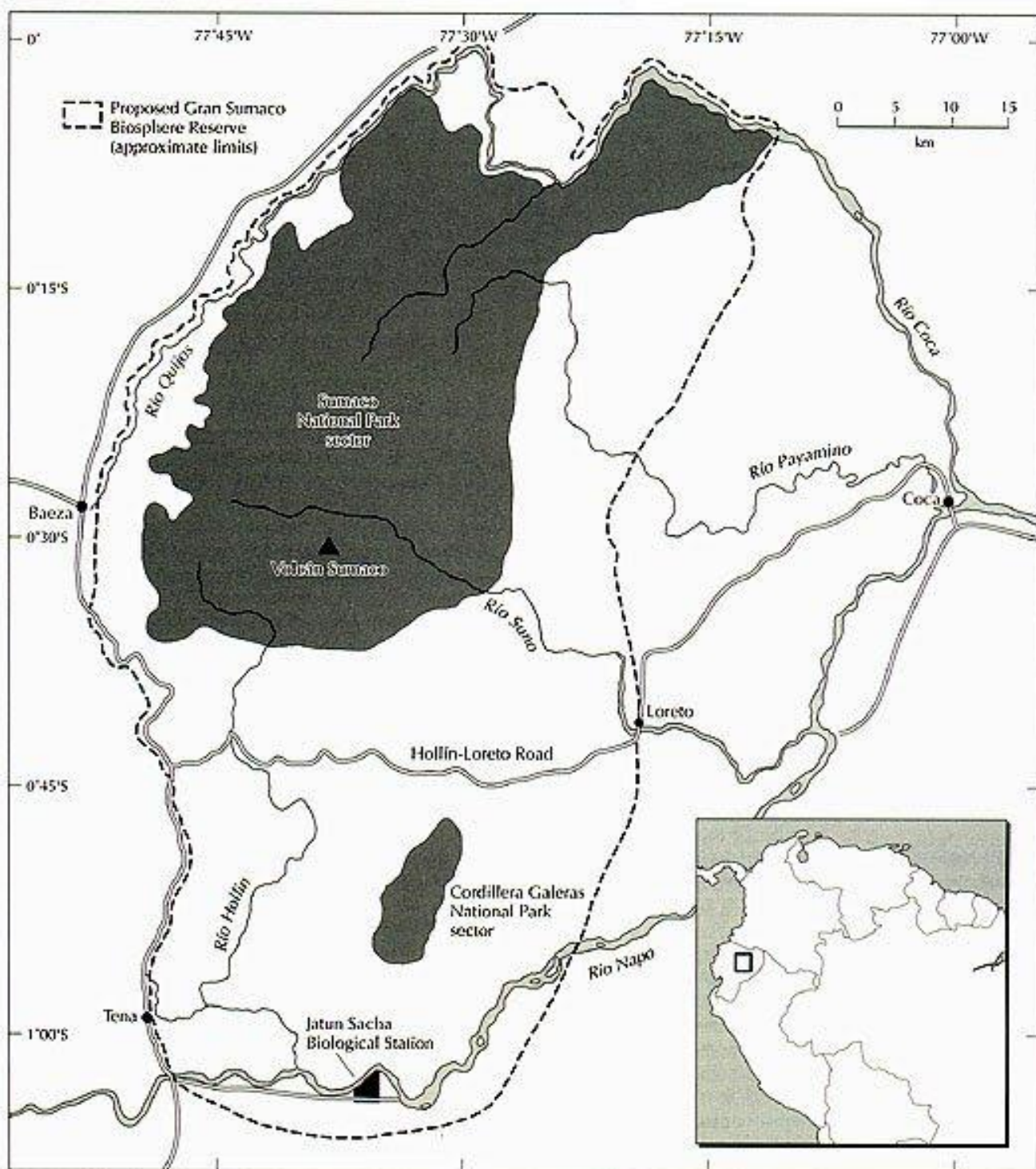


Figure 2. Biosphere Reserve Sumaco (Bigal River Biological Reserve 2012).

Results

The results of the survey are presented in five categories of sustainable tourism: a) the importance of the BRS, b) the environmental, c) economical, d) social and e) cultural dimension. Results of the expert interviews serve as additional information for the discussion and conclusion.

a. Importance of the BRS

The importance of the BRS has been assessed based on four questions. The analysis shows that 40% of the respondents do not know that they live in a Biosphere Reserve. Moreover, 44% cannot name the importance of the BRS for neither the region nor the country. Interestingly, only 42% of the interviewed persons know the main tourist attractions of the BRS.

A remarkable result in the importance of the BRS in relation to sustainable tourism is that 95% of all hotels do not take part in any project or organization seeking to protect the BRS.

b. Environmental Dimension

The environmental actions of the hotels in the BRS were examined by asking about the management of natural resources and waste, the utilization of environmental compatible goods and the involvement of other actors with regard to sustainable efforts of the hotels.

Sixteen percent of the hotels record their water usage and 35% apply methods to save water, 31% assess the quantity of electricity which is utilized in the hotel and 51% try to use less electric energy by installing specific devices. Furthermore, 65% of all hotels do not provide any verbal or written information to the tourists about the necessity to preserve natural resources.

Additionally, 53% of the hotels separate their waste whereas only 11% participated in campaigns or projects for recycling or reuse. In regards to the use of environmental compatible hotel supplies, only 9% of the respondents used ecologically compatible cleaning supplies in their hotels.

Sustainable development includes the participation of all actors. In this study, the hoteliers

were asked if they have been evaluated for their environmental or sustainability practices in the past. Impressively, 73% of the hoteliers have never been surveyed for practicing sustainable development activities by external concerned actors, even existing a great interest from the Ministry of Tourism to introduce good tourism practices.

c. Economic Dimension

The evaluation of economic aspects of sustainable tourism is based on two issues, the support of the local market by the hotels and the relation of the customers and the hotels.

The results show that 91% of the hotels do not sell or offer any goods that have been produced in the BRS. On the customer side, about two thirds of the hotels do not verify their customer satisfaction, so that the vast majority does not examine their business practice or the potentials for general improvement.

d. Social Dimension

The social dimension was addressed by asking about the working conditions of the employees in the hotel industry at BRS.

In the BRS, 98% of the hotel's employees are insured and 58% are regularly trained regarding to hotel issues. The hoteliers stated that 40% educate their staff on sustainability topics. Also, 40% of the interviewed hotels participate in private or public partnerships which are open to all of them for example in the chamber of tourism.

e. Cultural Dimension

Cultural aspects of sustainable tourism in the BRS were addressed by asking the hoteliers about their efforts to preserve the local culture.

Just 5% are supporting the cultural conservation by joining an organization. This study found that 80% of the hotel industry members at the BSR do not provide any verbal information or written material to the tourists about the care of native culture. Fifty one percent include the regional culture in their hotel infrastructure but only 11% of the hotels promote community tourism and the sale of handcrafts that have been made locally.

Discussion and Conclusion

The evaluation of the survey shows the hotelier's unconsciousness in relation to the importance of the BRS and uncovers a low extent of sustainability standards in the hotel industry. The interviewed experts support this interpretation of the results but also confirm that there is partial engagement of the hotels to improve their sustainability standards.

The importance of the Biosphere Reserve is not well-known to the hotel industry. The results of the survey illustrate that the hoteliers are not entirely aware that they host tourists in a Biosphere Reserve. Furthermore, they are not completely conscious of the reserve's opportunities and the responsibility they have according to their business actions. This has also been argued by experts and evidences the significance of future sustainability education in the BRS. Fundamental knowledge about the characteristics of the BRS and sustainability could have beneficial impacts on the hotel sector, the environment and the society because learning is a key aspect to initiate and foster sustainable development and future efforts (Henry 2009).

The sustainability standards which are valued along the sustainable tourism criteria are neither implemented nor consciously pursued. Only three of thirteen applied sustainable tourism categories can be interpreted as positive or partially fulfilled (Table 1). The other ten categories show a lack of realization or even no actions of the hotels.

Looking at the details, it can be pointed out that the vast majority of the hotels do not provide any information about the cultural and environmental preservation for tourists, whereas education and information about environmental, social and cultural impacts of human activities are important parts of a sustainable development (Fien and Tilbury 2002). This is an area that must be pursued by organizations to enhance the sustainability standards.

Only few hotels participate actively in campaigns, projects or organizations which aim to conserve the environment and the culture. Although more than one third of the interviewed hotels take part in public and private partnerships, there are more options to initiate a constant dialogue concerning sustainable tourism. A joint learning process is hindered by low participation,

which also undermines processes of sustainability. Sustainable tourism can only be realized with the efforts of many interest groups (TSG 2007). Consequently, more participation is needed to learn from each other and to discuss future tourism activities in the BRS, whereas there exist many methods to realize a discourse (Murphy and Price 2005, Halme 2001).

An essential consideration is that the cultural dimension of sustainable tourism in the BRS misses an active involvement of the hotels. About half of them include cultural goods in the infrastructure but the majority does not support the communities by selling goods or offering excursion.

A high percentage of the hoteliers do not invest in the protection of natural resources. It can be outlined that the hotels in the BRS do not intensively take part in preserving water and electricity because only a minority documents the quantity of the usage, applies methods to save resources, and communicates to tourists about the significance of natural resources. This is not only problematic with regard to the loss of environmental services, which are indispensable to life and the damage of nature, but also is related to financial aspects. The hotels could minimize costs by saving resources if they would apply simple methods of environmental accounting (IFA 2005).

In this context, it has to be stated that the hotels, as well, fail to notice the potential of the local market. A high number of the interviewed hotels do not actively support the regional economic development because they do not sell or offer goods which have been produced in the region. These results highlight the importance of a local organization that include hoteliers, craftsmen, environmentalist, and others, to promote local markets.

Altogether, the results demonstrate that the hotel industry can be characterized by the absence of engagement in the cultural, environmental and economic dimension and it can be stated that there is room for improvement. This is also stated by local experts. They argue that the hotel sector of the BRS does not focus on sustainability and is not prepared to meet the requirements to reduce these impacts. According to the experts, only few hotels work on a certification for good practices. The latter is a key issue to promote sustainability standards.

The analysis of the social dimension of the survey shows that there are internal efforts to train the staff concerning to sustainability issues. This is interpreted as a positive result according to sustainable tourism in the BRS. It means that there are efforts to implement new ways of business and also introduce the employees into alternative work processes. But still, nearly half of the respondents did not initiate sustainability trainings so far. Furthermore, the working conditions are interpreted as good. Nearly all staff members are insured and more than half of the hotels train their employees according to general work issues. The working conditions which were evaluated in the BRS take a relevant part of sustainable tourism and can be summed as positive. Nevertheless, there are possibilities for enhancement, for example investing in further professional sustainability training.

The aim of the study was to examine the hotel industry in the BRS. The analysis shows there are

crucial components and current habits of business, which need to be changed to take a path in direction of sustainable tourism. The analysis results in recommendations for future actions and changes in the BRS (Table 1).

Future research is needed to investigate the role of external institutions by implementing sustainability standards in the hotel sector in the BRS. Therefore, it might be important to assess if policies have had effects on the hotel industry until now and if there are alternatives to regulate the future path of the hotels in direction of sustainability. Hence, a transdisciplinary method could be used to involve not only the hotels but also other actors in the research process to enhance participation as well. Last but not least, a reserve-wide program or campaign could lead to improvements by induct the hotels and the tourists into the singularity of the environment and the local culture.

Table 1. Sustainability standards in the hotel sector and recommendations for the hotels.

Category of sustainable tourism	Criteria of sustainable tourism fulfilled?	Recommendations for future actions
Environmental dimension		
Usage of environmental compatible cleaning supplies	No	Use as much environmental compatible goods as possible Avoid chemical cleaning supplies
Responsible energy and water consumption	No	Record the use of water and electricity per month and observe the amount of utilized resources Invest in new methods to save resources and to also save costs Inform tourists actively about the importance of resources by introducing the issue at their arrival and providing written information in the rooms and other common places of the hotels
Support of biodiversity preservation	No	Participate in meetings with other hotels to discuss new ways of environmental protections in the hotel industry and to learn from each other Take part in local organizations of tourism
Institutional coordination information		Necessity of a institutional coordination to apply good tourism practices Inform about the importance of the biosphere reserve, its function and structure

Table 1. Continuation.

Category of sustainable tourism	Criteria of sustainable tourism fulfilled?	Recommendations for future actions
Economical dimension		
Long term actions	No	Take part in projects or organizations to protect the local culture and nature Minimize costs by investing in new technologies
Institutional coordination		Identify strategic places of tourism and education in order to contribute to the local economy
Customer satisfaction	No	Enter a dialogue with clients and interview each customer about its satisfaction Offer excursions to the BRS or work close with local agencies to guarantee security and health
Building and infrastructure consistent with nature and the local culture	Partially	Build according to traditional architecture including local materials and Amazon designs
Information for the tourists	No	Hand out written information about the local culture in each room and be open to inform verbally mainly about the geography of the BRS
Support local market	No	Use and sell goods which are produced locally in an appropriate place in the hotel to foster economic development
Social dimension		
Safety of the employees	Partially	Provide all employees health insurances and other social security
Training of the employees	Partially	Train the staff in issues with regard to customer services and working processes Educate employees regularly according to sustainable development aims
Local organization		Continue promoting tourism with broad participation of the hoteliers
Cultural dimension		
Codes for excursions to local communities	No	Implement rules for excursions to not disturb local communities
Support of cultural protection and conservation	No	Participate in a project or organization which offensively protects local costumes
Support of local and culture related goods	No	Sell local to conserve cultural related products

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